

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous listings, and versions, of claims in the application.

Listing of Claims:

1–17. (Canceled)

18. (Currently Amended) A method of delivering a bioactive substance within a vessel, the method comprising:

providing apparatus comprising an anchor reversibly expandable from a delivery configuration to a deployed configuration, and an eluting material adapted to elute a bioactive substance, at least one of the expandable anchor and eluting material including an anti-clotting agent;

expanding the anchor to the deployed configuration within the vessel, the anchor engaging an interior wall of the vessel; [[and]]

eluting the bioactive substance from the eluting material into blood flowing through the eluting material and through the anchor;

after a predetermined period, advancing a catheter within the vessel and engaging the anchor;

collapsing the anchor to the delivery configuration; and
removing the apparatus from the patient's vessel.

19. (Previously Presented) The method of claim 18 further comprising, prior to expanding the anchor:

disposing the anchor in the delivery configuration within a distal end of a lumen of a delivery sheath; and

advancing the distal end of the delivery sheath to a delivery site within the vessel.

20. (Previously Presented) The method of claim 18, wherein eluting the bioactive substance comprises eluting a substance chosen from the group consisting of gene therapy vectors, gene therapy sequences, and drugs.

21. (Currently Amended) The method of claim 19, further comprising:
~~collapsing the anchor back to the delivery configuration~~ retracting the anchor within a the
distal end of the ~~delivery sheath lumen catheter; and~~
~~removing the apparatus from the patient's vessel.~~

22. (Previously Presented) The method of claim 19, further comprising, after
expanding the anchor, removing the delivery sheath from the patient's vessel.

23. (Previously Presented) The method of claim 18, wherein providing apparatus
comprising an anchor comprises providing a resiliently expandable cage.

24. (Previously Presented) The method of claim 18, wherein providing apparatus
comprising an eluting material adapted to elute a bioactive substance comprises providing a
material chosen from the group consisting of a spongy material, a floppy elongated member
adapted for multiple turns, and a swellable pellet.

25. (Canceled)

26. (Currently Amended) An intravascular device for delivering a bioactive
substance into systemic circulation of an animal, the device comprising:
an anchor immobilizable to an inner wall of an intact blood vessel which, when
immobilized in the blood vessel, permits blood in the vessel to pass therethrough; and
an eluting material adapted to elute the bioactive substance, which when introduced into
the blood vessel is retained by the anchor and releases the bioactive substance into blood flowing
therethrough; and
an anti-clotting agent disposed on at least one of the anchor and the eluting material.

27. (Previously Presented) The device of claim 26, wherein the anchor comprises at
least one element biased in a radially outward direction when immobilized in the blood vessel.

28. (Previously Presented) The device of claim 26, wherein the anchor is a stent.

29. (Previously Presented) The device of claim 26, wherein the anchor comprises a head and a plurality of filaments attached by one end to the head.

30. (Previously presented) The device of claim 29, wherein the anchor is an embolism anti-migration filter.

31. (Previously Presented) The device of claim 26, wherein the anchor comprises a receptacle for receiving the eluting material.

32. (Previously Presented) The device of claim 26, wherein the eluting material comprises a spongy material.

33. (Previously Presented) The device of claim 32, wherein the spongy material comprises foam.

34. (Previously Presented) The device of claim 32, wherein the spongy material comprises steel wool.

35. (Previously Presented) The device of claim 26, wherein the eluting material comprises a floppy elongated member.

36. (Previously Presented) The device of claim 35, wherein the floppy elongated member is adapted for multiple turns.

37. (Previously Presented) The device of claim 26, wherein the eluting material comprises a swellable pellet.

38. (Previously Presented) The device of claim 37, wherein the swellable pellet is water swellable.

39. (Previously Presented) The device of claim 26, wherein the bioactive substance is a cardiovascular drug or a coagulation factor.

40. (Previously Presented) The device of claim 26, wherein the eluting material comprises a plurality of pre-selected drugs which are released into blood.

41. (Previously Presented) The device of claim 26, wherein the eluting material releases the bioactive substance over a pre-selected period of time.

42. (Currently Amended) A method of introducing into a blood vessel a delivery device for delivering a bioactive substance directly into systemic circulation of an animal, the method comprising the steps of:

providing an anchor having an eluting material coupled thereto, at least one of the anchor and eluting material having an anti-clotting agent disposed thereon;

immobilizing ~~[[an]]~~ the anchor to an inner wall of an intact blood vessel, which when immobilized permits blood in the vessel to pass therethrough;

~~introducing into the blood vessel an eluting material adapted to elute the bioactive substance, such that when introduced into the blood vessel the eluting material elutes the bioactive substance~~ into blood flowing through the eluting material; and

releasing the anti-clotting agent to prevent the formation of clots within or around the anchor and eluting material

~~permitting the eluting material to be retained in the blood vessel by the anchor.~~

43. (Previously Presented) The method of claim 42, comprising the additional step of introducing the anchor into the blood vessel via a catheter.

44. (Previously Presented) The method of claim 42, wherein the eluting material is introduced into the blood vessel by a catheter.

45. (Previously Presented) The method of claim 42, comprising the additional step of coupling the eluting material to the anchor.

46. (Previously Presented) The method of claim 45, wherein the eluting material is coupled to the anchor after the anchor is immobilized in the blood vessel.

47. (Currently Amended) An anchor for implantation into an intact blood vessel of an animal, the anchor comprising:

a first element adapted for immobilization to an inner wall of the blood vessel, wherein the first element comprises at least one member biased in a radially outward direction when immobilized in the blood vessel; and attached thereto

a second element adapted to couple with an eluting material, the eluting material adapted to elute a bioactive substance into blood flowing therethrough; and

an anti-clotting agent disposed on at least one of the first and second elements to prevent the formation of clots on or within the first and second elements.

48. (Previously Presented) The anchor of claim 47, wherein the first element is a stent.

49. (Previously Presented) The anchor of claim 47, wherein the first element comprises at least one outwardly extending strut.

50. (Previously Presented) The anchor of claim 47, wherein the second element comprises a joint.

51. (Previously Presented) The anchor of claim 50, wherein the second element comprises an extensible band.

52. (Currently Amended) Apparatus for implantation into an intact blood vessel of an animal, the apparatus comprising:

a first element for engaging a receptacle of an anchor immobilizable to an inner wall of the intact blood vessel;

a second element comprising an eluting material adapted to elute a bioactive substance into blood flowing therethrough; [[and]]

means for coupling the first element to the second element; and

an anti-clotting factor disposed one of the first and second elements.

53. (Previously Presented) The apparatus of claim 52, wherein the eluting material comprises a floppy elongated member.

54. (Previously Presented) The apparatus of claim 53, wherein the floppy elongated member is adapted for multiple turns.

55. (Previously Presented) The apparatus of claim 52, wherein the eluting material is a swellable pellet.

56. (Previously Presented) The apparatus of claim 55, wherein the swellable pellet is a water swellable pellet.

57. (Previously Presented) The apparatus of claim 52, wherein the eluting material comprises a spongy material.

58. (Previously Presented) The apparatus of claim 57, wherein the spongy material comprises a material selected from the group consisting of foam and steel wool.

59. (Previously Presented) The apparatus of claim 52, wherein the bioactive substance is a cardiovascular drug or a coagulation factor.

60. (Previously Presented) The apparatus of claim 52, further comprising a plurality of pre-selected drugs for release therefrom.